



SMARTER DATA SMARTER WORLD

Meeting The Geospatial Data Challenges of A New Era

Chad Baker

1Spatial Inc.

Account Executive

Chad.Baker@1spatial.com

Data Quality can be effectively managed when you know...

- **Where you are** (the current state of your data)
- **Where you need be** (the desired state of your data)

The key is to determine the **exact business requirements** to define quantitative quality metrics

Which rules are mandatory\optional with acceptable conformance levels for each rule



50 Years in Developing Data Management Solutions

Automated QA\QC Validation & Cleanup



Change Detection Conflation



CAD & Asset Validation



Master Data Mgt



Ordnance
Survey



Ordnance
Survey
Ireland



3,200 Different Data Providers

QA\QC
Rules
Validation

Schema
Mapping

Change
Detection

Manual
Review

Database
Update

Over 90% Automated with

1integrate



Data Validation

Automate manual, time-consuming, subjective QA tasks. Certification required for proof of data quality (SLA's, legislation)

Data Integration

Maximize ROI through re-use, integration of data across the enterprise

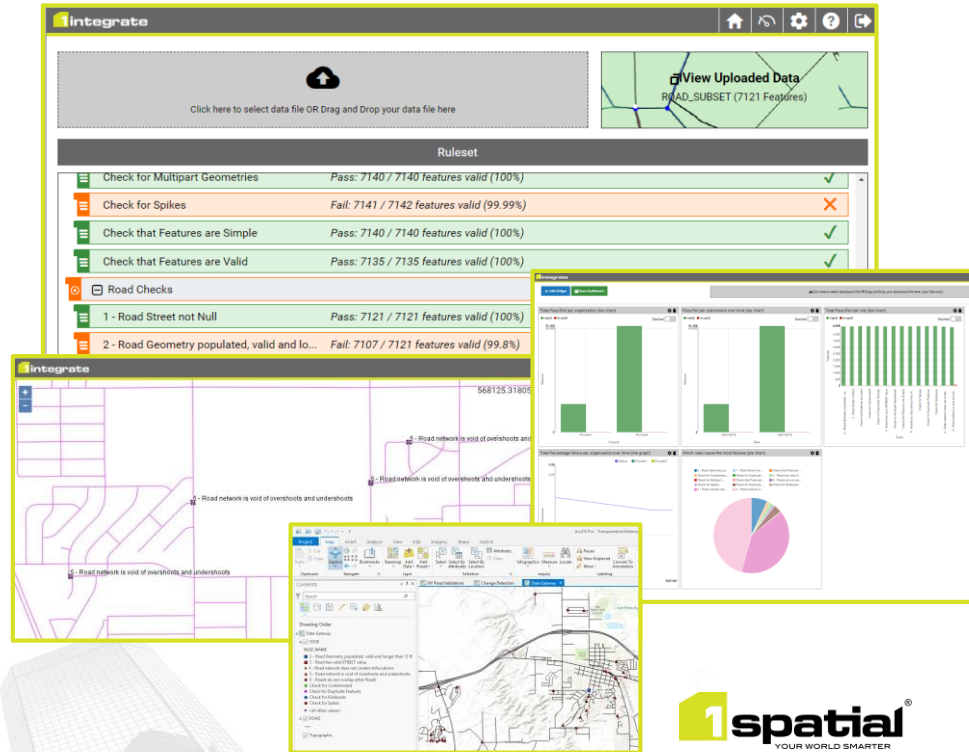
Data Enhancement

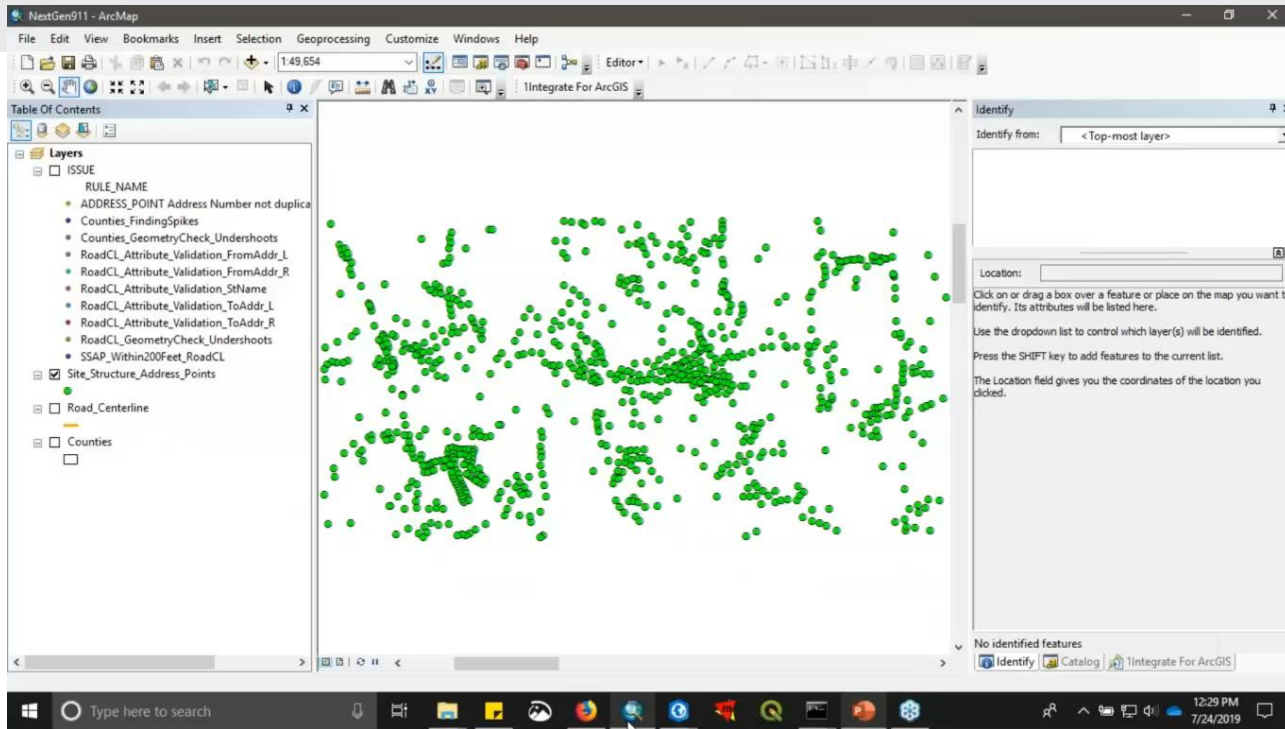
Automate cleaning tasks, create new data, construct repeatable, non-subjective corrective actions.



State of Maryland Use Case – NextGen911 Validation As A Service

- Creating Statewide Database for Addresses, Centerlines, PSAP, etc
- Counties Responsible for data
- State Providing Validation Service to validate county data to NENA Standard
- Using 1Integrate and Data Gateway

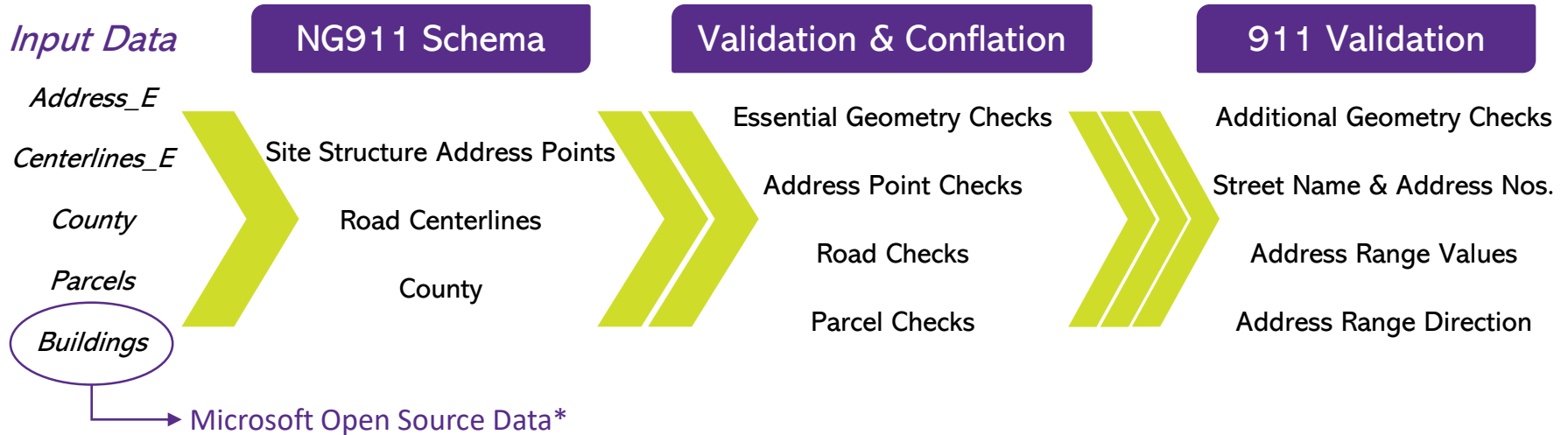




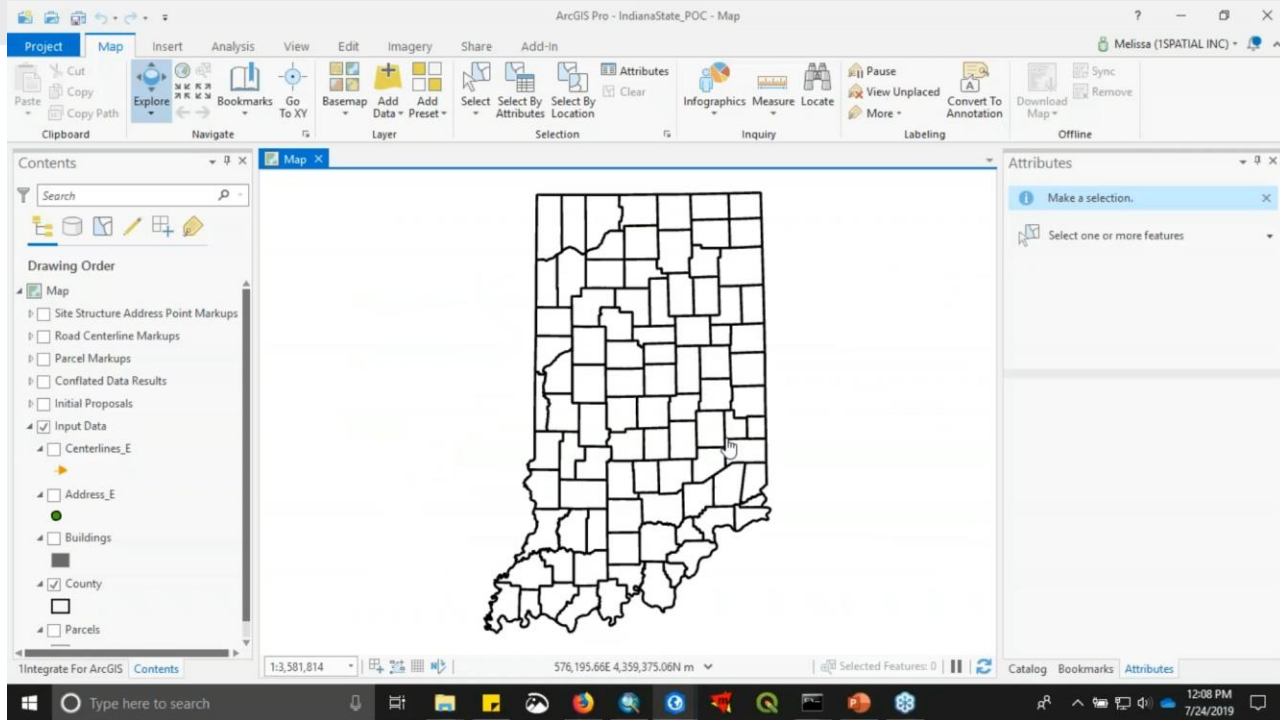
<https://1spatial.com/us/watch-now-meeting-the-geospatial-data-challenges-of-a-new-era/>



Indiana State Data



*<https://github.com/Microsoft/USBuildingFootprints>



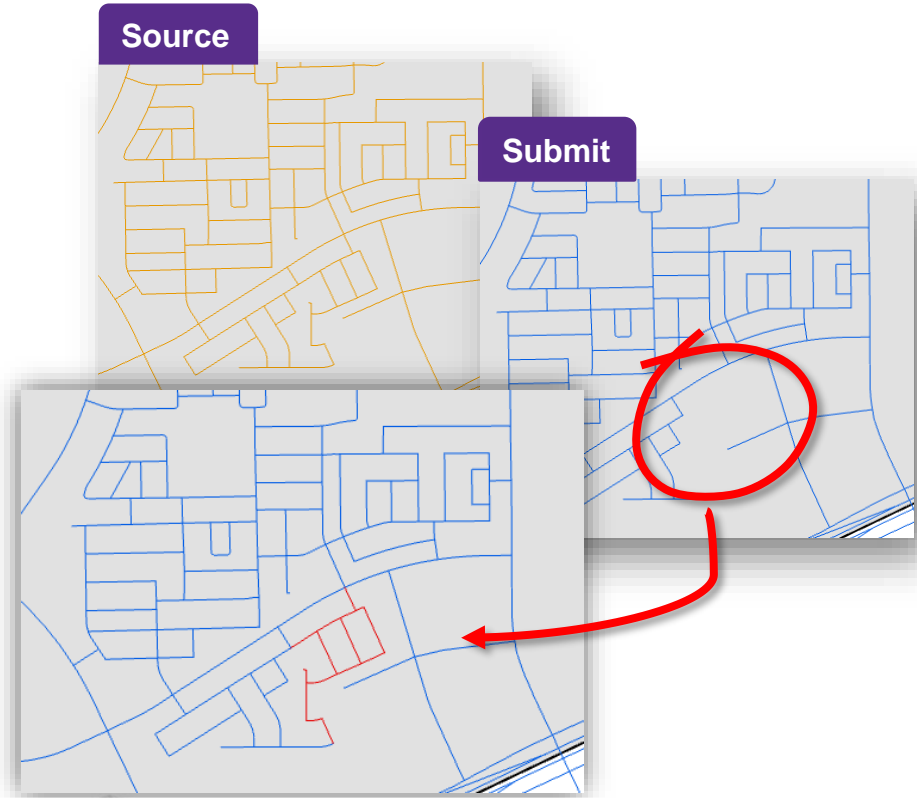
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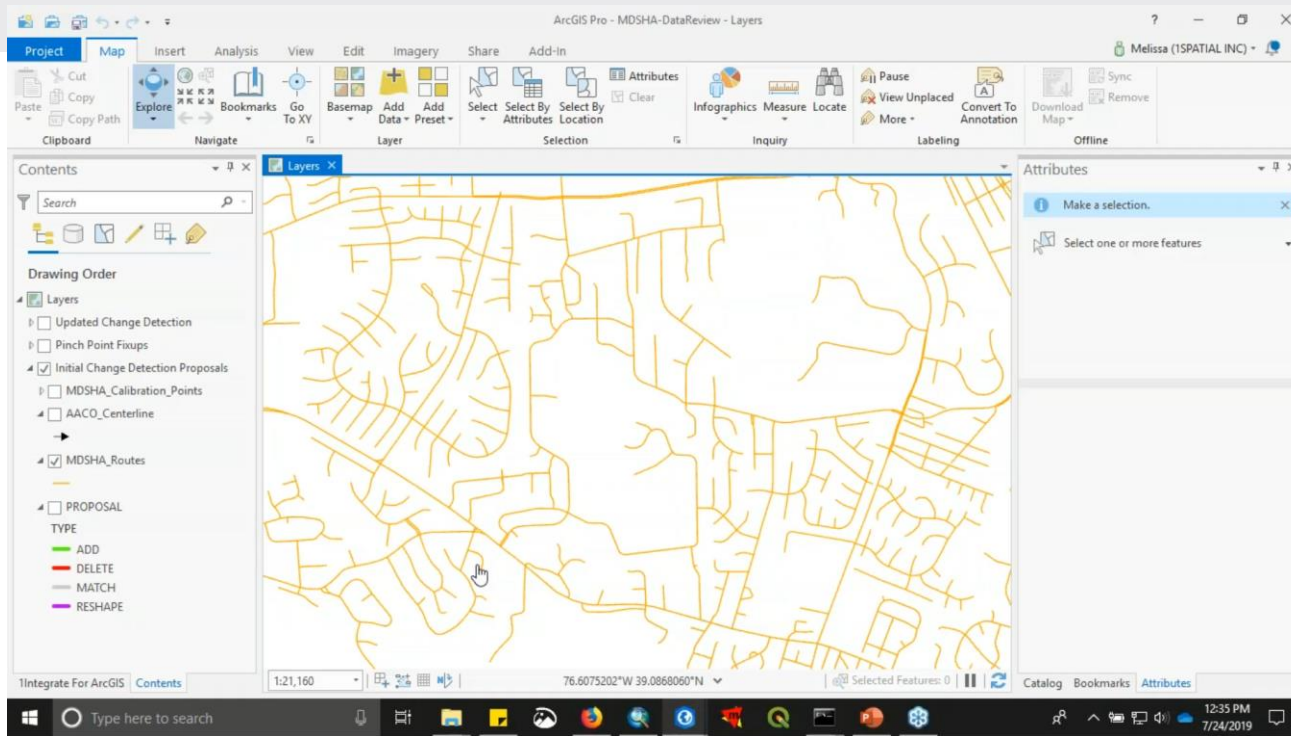


Implementing Change Detection Processes in Data Governance

- › Data submission from City to County to State to Country
- › Schema incompatibility
- › Representation mismatch
- › Build rules applicable to point, line, and polygon assets

Use 1Integrate to automate the process of identifying and then updating *only* what has changed.





<https://1spatial.com/us/watch-now-meeting-the-geospatial-data-challenges-of-a-new-era/>



CAMA\GIS Cross System Validation - Cuyahoga County, Ohio

- CAMA\GIS Systems operate in Siloed Environments
 - Out Synced
 - Missing Records
- Using 1Integrate
 - Connect to both sources
 - Validate to identify missing records in either system
 - Validate systems are in sync
 - Can facilitate the attribute updates in the GIS to match CAMA

The screenshot displays the 1Integrate software interface. The top navigation bar includes tabs for Data Stores, Rule Discovery, Rules, Actions, Action Maps, Sessions, Admin, 1Spatial, Logout, and Help. The main window is divided into two panes. The left pane, titled 'Rule Condition', shows a hierarchical tree structure for a rule condition: 'Rule condition for PARCEL objects' contains 'There is exactly 1 CAMA_TABLE object for which ...', which contains 'PARCEL.parcel_id equals CAMA_TABLE.PPN', which contains 'PARCEL.parcel_id equals CAMA_TABLE.PPN'. The right pane, titled 'Element Details', contains a description of the rule condition and a form to specify the class and name of the object to check. Below the panes is a 'Description' field. The bottom pane, titled 'Tasks', shows a list of tasks with their status, progress, and a 'Rebuild' button. The tasks are organized into a table with columns for Task Name, Progress, and Rebuild.

Task Name	Progress	Rebuild
Open Data: [Cuyahoga County / CAMA Table]	Rebuild	✓
Open Data: [Cuyahoga County / County GIS Data]	Rebuild	✓
Pause	Rebuild	✓
Check Rules: [Cuyahoga County / Validate CAMA Table / 01 - CAMA PPN is not NULL]	Conformance: 99.97%	Rebuild
Check Rules: [Cuyahoga County / Validate CAMA Table / 02 - CAMA PPN is Valid]	Conformance: 89.18%	Rebuild
Apply Actions: [Cuyahoga County / CAMA / Remove NULL PPN]	Rebuild	✓
Check Rules: [Cuyahoga County / Validate CAMA Table / 01 - CAMA PPN is not NULL]	Conformance: 100%	Rebuild
Check Rules: [Cuyahoga County / Validate CAMA Table / 02 - CAMA PPN is Valid]	Conformance: 89.2%	Rebuild
Check Rules: [Cuyahoga County / Validate Parcel Data / 01 - Parcel Boundary Parcel Pin is not NULL]	Conformance: 100%	Rebuild
Check Rules: [Cuyahoga County / Validate Parcel Data / 02 - Parcel Boundary Parcel Pin is Valid]	Conformance: 99.98%	Rebuild
Apply Actions: [Cuyahoga County / Parcel Polygon / Cleanup / Remove Invalid Parcel Pins]	Rebuild	✓
Check Rules: [Cuyahoga County / Validate Parcel Data / 02 - Parcel Boundary Parcel Pin is Valid]	Conformance: 100%	Rebuild
Check Rules: [Cuyahoga County / Cross DB Validation / 01 - Each Parcel Boundary has a CAMA Record]	Conformance: 99.87%	Rebuild
Check Rules: [Cuyahoga County / Cross DB Validation / 02 - Each CAMA Record has a matching Parcel - FAST]	Conformance: 79.97%	Rebuild
Check Rules: [Cuyahoga County / Cross DB Validation / 03 - CAMA Data matches Grantee and Grantor]	Conformance: 49.16%	Rebuild
Pause	Rebuild	✓



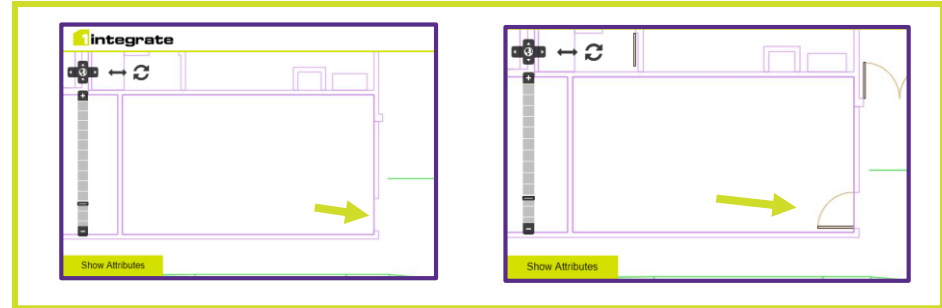
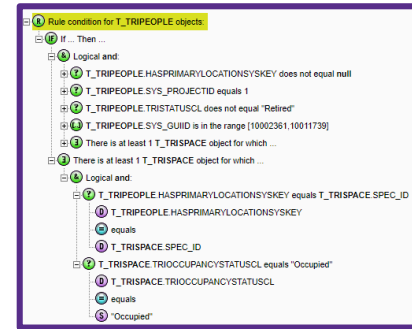
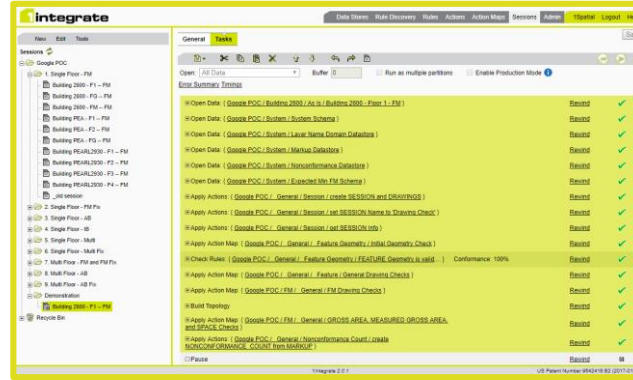
Google Real-Estate World Wide Services

CAD

- CAD Drawings must be aligned
- Spaces must be closed
- Rooms must have openings
- Doors are on correct layers

TRIRIGA

- People must have an assigned room
- People Assigned Room exists in Space Table
- People must not be in common spaces
- The number of people who people occupy a space must be less than the capacity



Caltrans – TAMS Data Quality – Use Case

- CalTrans implementing a Transportation Asset Management System
 - Identify the state of their Existing Asset Systems
- Contracted with Gartner\1Spatial to assess Asset Systems
- 1Integrate is being used to validate
 - Pavement, Culverts, Project Mgt, LRS, Bridges, etc



THANK YOU

Chad Baker

Chad.Baker@1spatial.com

Additional webinars and use cases can be found at
<https://1spatial.com/us/on-demand-webinars/>

